



PATENT – AFTER FINAL

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Wang et al.

Application No. 10/076,881

Art Unit: 1764

Filed: Feb. 13, 2002

Examiner: W. Griffin

For: METHOD AND CATALYST
STRUCTURE FOR STEAM
REFORMING OF A
HYDROCARBON

Atty Docket: B-1482-CIP2

DECLARATION PURSUANT TO 37 CFR § 1.132

1. I the undersigned inventor, Yong Wang, am a worker of at least ordinary skill in the field of catalyzed chemical reactions in chemical reactors.
2. The definitions of residence time and contact time are well known.

3. The shortest residence times reported by Noda et al. in U.S. Patent No. 4,101,449 are 63 msec at 950 °C and 65 msec at 900 °C. Assuming that Noda et al. ran at atmospheric pressure, residence times can be converted to contact times as follows:

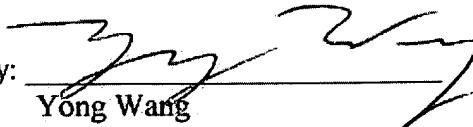
$$\text{contact time} = (\text{residence time} \times T)/273.$$

Thus, the shortest contact times reported by Noda et al. are 282 msec at 950 °C and 279 msec at 900 °C.

4. Typically, reported values are the best values and are reported near the limits of heat and/or mass transfer. Therefore, further reducing the contact times of Noda et al. would be likely to substantially reduce hydrocarbon conversion.

5 I declare that all of the above statements made of my own knowledge are true and all statements made on information and belief are believed to be true. I understand that willful false statements and the like are punishable by fine or imprisonment, or both (18 U.S.C. §1001), and may jeopardize the validity of the application or any patent issuing thereon.

Date: 2/1/05

By: 
Yong Wang